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Hugh Cecil Earl of Lonsdale.



THIS BOOK RESTORED IN 2019
THROUGH THE SUPPORT OF

CARY WOOD

By Royal letters patent — England 1863.

DESCRIPTION
OF THE
MECHANICAL HORSE



INVENTED

BY

COLONEL VON HAMEL

Equerry to His Majesty the King of Wurttemberg, Commander of the Royal Wurttemberg Order of Frederick, the Imperial French Order of the Legion of Honor etc. etc., Knight of the Royal Wurttemberg Order of the Crown, the Royal Swedlan Order of the Sword etc. etc.

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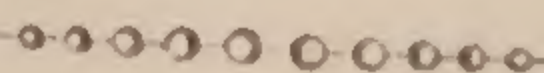
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The Art of Horsemanship consists in the rider's knowledge to manage under all circumstances his point of gravitation, and that of his horse, with ease and grace.

THE MECHANICAL HORSE.

INTRODUCTION.

From my very boyhood destined for the equestrian career, I was but five years old when first I got on horseback. I was trained for the profession by my father (late Equerry to the Duke of Brunswick), and by other eminent equestrians, and soon acquired proficiency in the different branches of horsemanship, to wit: military riding, school riding, hunting, riding steeple-chases, etc.

Experience at that time, and during the campaigns of 1806 to 1815, taught me the most indispensable qualities of a perfect equestrian to be *agility of body* and *presence of mind*. In as much as these qualities cannot be attained but by a long course of practice, and not without danger, I set my mind to study the best means of teaching the pupil horsemanship (without danger to body or limb) and within a shorter period of time than heretofore required.

For many years I tried different experiments. Having finished my drawings and calculations on paper, I commenced making and remaking models, proving to be more or less satisfactory. At last, after ten years' continued labor I succeeded in making a Mechanical Horse of natural size (16 hands) which after many alterations and improvements answered the intended purpose. It was examined by a Committee of Gentlemen, the testimonial of one of which is hereto annexed in translation, marked Schedule "A." For fifteen years more I went on improving my invention by new additions, and having now achieved the masterpiece to which I devoted a lifetime — a true copy of nature's handiwork — excellent and admirable in form and movement — I come to exhibit it before a discerning and enlightened Public to test its practical use. The Mechanical Horse performs all the movements of the living original at a rate that may at will be checked or impelled. It is therefore peculiarly adapted for instruction, and the young beginner may be taught to counteract any series of movements, the most vicious horse may practice. To be forewarned is to be forearmed. — That such an invention required a great deal of labour expense and ingenuity will be easily understood, and that it remains unparalleled among inventions, is a matter beyond doubt.

By means of the Mechanical Horse the different theories of horsemanship advocated by our modern schools may be put to a practical test. The teacher of horsemanship should adopt the plan of rendering the exercises as easy as possible to the pupil and assisting him to perform them rather by skill than by physical force. If in riding you are shaking your

spine and thereby affect the brains and the chest you will never be able to endure a long ride. But if you are competent to protect your spine against the continual shock by an easy elastic and straight seat you will be less liable to fatigue, and easily make up for loss of strength in the extremities produced by muscular exertions. The spine should bend elastically, slowly or rapidly, and should act, as it were, like a vibrating column. If, on the contrary, you are riding in such a way that your spine should lose its elasticity, and your body stiffen, you may be sure to be out of breath, to get into perspiration, to become exhausted after a few hours' hard riding. Now fancy an unbroken ride of 100 to 250 miles by day and night, in any kind of weather, on bad roads and still worse posthorses, and you may guess the probable result. It is only by means of an elastic seat and a well enured body that such feats of horsemanship may be performed. That in such cases untiring energy and a strict diet are of the highest value, is a well known fact.

On this subject I am speaking from experience, for in my youth I have performed such like feats. I rode once in forty six hours from Bologna across the Abruzzi to Naples without change of garment and having to swim a swoln river. Another time I rode in sixty hours from Cannes to Paris.

The Mechanical Horse illustrates and carries out these principles by stretching all muscles sinews and tendons and by teaching the rider always to keep his balance while on horseback, or in case of need to disentangle himself from it, safely landing upon his legs.

The Mechanical Horse has been examined and approved by expert judges of horsemanship from every

country in Europe and the most flattering testimonials to its perfection and use have been awarded to the inventor.

It has also been visited by the following Crowned Heads and Princes: The Emperor of Russia, the Emperor of Austria, the King of Prussia, the King of Saxony, the King of Wurttemberg, and the Royal Family, H.R.H. the Prince of Wales, the Duke of Cambridge, the Crown Prince and Crown Princess of Prussia, Prince Napoleon, Prince Weimar, and many other Princes and Nobles.

The Mechanical Horse has been visited and favorably noticed by the leading members of the press. Annexed (marked Schedule "B.") I give but one extract from the *Era* of 3^d August 1862 to which I beg leave to call your attention.

Colonel von Hamel,

Inventor and Patentee in England.

Stuttgart 1863.

Description of the Mechanical Horse.

The exterior of the Mechanical Horse is a just and accurate model of the living animal. Its neck is of the very same flexibility, its movements of the same elasticity.

It is so ingeniously constructed that it works equally well and easy under the weight of a child, as that of a person of 250 æ. To keep the horse agoing the whole day, requires but a few table spoonfuls of oil, and an equal quantity of tallow a-week. The machinery is very solid and acts so easy that any one may learn to understand its mechanism in a few hours.

The room for the Mechanical Horse should measure at least twenty six feet square, because the horse, if rapidly turned, may fling its rider a distance of three or four yards. It should be fitted up with mattresses to prevent accidents.

Exercises on the Mechanical Horse.

The Inventor has established the following progressive rules of instruction for the Mechanical Horse, and recommends that the pupil should be made to practice every exercise so long until he has thoroughly mastered it at the quick rate of the machinery.

In giving instructions, all falls should be avoided. Though there is no danger on the mattresses, yet pupils are apt to be scared by them without use. From easy movements the quick rate should be proceeded to by gradual degree.

Exercises.

- 1) *To mount (without spurs), from the left side (the horse being quiet, — in the horizontal position, rearing, kicking, and leaning position ;*
- 2) *To dismount in the above positions ;*
- 3) *To mount from the right side as above ;*
- 4) *The seat on horseback ;*

- 5) *Exercises with the hand and leg; — To obtain the right position of the head and neck of the horse, the same being quiet and stationary;*
- 6) *The horse rises by degrees to a perpendicular position;*
- 7) *The same to an angle of 50° and turning right and left;*
- 8) *Kicking;*
- 9) *Riding up-and down-hill, with sudden turning the hill being low or very steep;*
- 10) *Buckjumping;*
- 11) *The side jump and twist — as also the falling on right or left side, as upon ice;*
- 12) *The horse turning round to the left, while rearing, kicking, buckjumping, or jumping to the side or twist;*
- 13) *The same to the right;*
- 14) *The different method of sitting, the jerks of the horse's back or croupe;*
- 15) *Rearing and falling to the left;*
- 16) *Rising on the left;*
- 17) *Rearing and falling to the right;*
- 18) *Rising on the right;*
- 19) *Rearing back on the left and rising immediately;*
- 20) *The same on the right;*
- 21) *Falling forwards on the knees;*
- 22) *Rising again;*
- 23) *Falling on the left side;*
- 24) *To rise with the horse again, or, to get quit of the stirrups and still keep the reins;*
- 25) *Falling on the right side;*
- 26) *Same as Nr. 24 on right side;*
- 27) *Exercises when the rider stands in the left stirrup and the horse rears, kicks, jumps or twists;*

- 28) *The same, the rider standing in right stirrup;*
- 29) *Exercises to hold a horse by the right rein, when it rears, kicks, jumps, wheels round or falls;*
- 30) *The same holding the left rein;*
- 31) *Exercises to catch the horse;*
- 32) *An uninterrupted sequence of all the above named Exercises according to the numbers from Nr. 1 to 31.*

APPENDIX.

§. 1.

General Advantages.

The pupil, after having passed through a regular course of practice on the Mechanical Horse, on mounting the living horse will be possessed of the following qualifications:

- 1) A great suppleness of the body and a firm seat;
 - 2) An elegant and unconstrained deportment;
 - 3) A firm hand;
 - 4) The presence of mind requisite to govern himself and horse;
 - 5) He will be acquainted with all tricks and vicious habits of the horse;
 - 6) All danger being past, he will have got rid of that timidity, so injurious to persons who never have been on horseback;
 - 7) He will be under no embarrassment in jumping ditches or fences;
 - 8) In any position, he will be able to keep his balance without any overexertion.
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§. 2.

Special Advantages.

The Mechanical Horse from a military point of view for the formation of an efficient body of cavalry offers the following advantages:

1) You will obtain in one half the usual time officers and non-commissioned officers all equally able for instruction and for horsebreaking;

2) You may teach by means of one Mechanical Horse, which will last at least forty years, as many men as on *ten* living horses;

3) You may go through a greater variety of exercises, and thereby render your men more expert than by the use of the living horse;

4) You will therefore by this invention effect

A saving of time!

A saving of horses!

A saving of money!

also materially improve and simplify the service.

§. 3.

Special Advantages.

In these times when Medical Gentlemen of the highest authority direct the attention of the Public to the necessity of *Gymnastic Exercise* for the rising generation of both sexes, the Mechanical Horse stands forth as one of the most prominent and useful means for a course of successful practice. Important as this subject is, I forbear adding anything after having alluded to it.

Schedule "A."

Testimonial of General Baron von Maucier, Grand Equerry to His Majesty the King of Wurttemberg.

At the request of Lieutenant Colonel von Hamel, Equerry to His Majesty the King of Wurttemberg I the undersigned together with four Officers of the Wurttemberg Cavalry, competent judges in horsemanship, proceeded to examine the Mechanical Horse, the invention of the aforesaid Lieutenant Colonel von Hamel, and I do hereby certify, that the Mechanical Horse performs all and every thing claimed by its inventor; that there is no danger at all for the pupil in using the same; that the rules set forth by the inventor are peculiarly adapted for the speedy progress of the pupil, and that they can be easily understood and taught by any riding master

General Baron von Maucier.

Stuttgart, 1st of July 1845.

Similar Testimonials have been granted by the following gentlemen, to wit: Baron von Troyff (Colonel), Baron von Linden (Major), Lieutenant Colonel von Weissenstein (Commander of the Horse Guards), and Colonel von Finckh (Commander of the fourth Regiment), all of the Royal Wurttemberg Cavalry.

Schedule "B."

Extract from the "Era" newspaper of August 3rd 1862.

It is long since we have witnessed anything so neat, perfect, and artistic, and at the same time so really useful, indeed, valuable, as a branch of manly and military education, as the object we were specially invited to examine, at the Horse Repository in Piccadilly.

Few visitors to the last and present Great International Exhibition can have neglected to have observed some admirable effigies of horses both carriage and riding, but it was left for Colonel von Hamel to invent an effigy *so like the real animal*, so perfect in all its parts, as to be actually startling.

Colonel von Hamel, Equerry to the King of Wurttemberg, has after more than thirty years of constant toil and study, succeeded in perfecting a model of a horse so anatomically correct, and so artistically perfect, that nothing but the actual contact of the hand can undeceive the visitor to this extraordinary piece of mechanism, that he looks upon a thorough-bred black Arab. The horse, however, is in reality a mere model of a favourite steed belonging to the King of Wurttemberg. The object of this beautiful piece of mechanism is, without risk or danger, to teach the equestrian how, not only to manage his horse, but to keep his saddle under every position into which the animal may throw himself. To make this intelligible to our readers we must inform them that on entering the loft in which the effigy is kept they look on a splendidly-built black horse, that, but for a rod or narrow pillar that comes from beneath and is atta-

ched to the centre of the horse's abdomen, through which tube or pillar the crank of the machinery that moves the whole fabric passes, he might believe he looked on a living animal, so perfect is the resemblance. When the Colonel or the operator mounts this horse, it is, by means of some machinery below, thrown into every attitude or position that a horse *can* assume, not only rearing to an almost perpendicular height, but suddenly falling on its knees or dropping over on its side, tries the skill of the rider in every conceivable motion to keep his seat and avoid being thrown. The great beauty of this contrivance is that the head is not only strictly natural, but that both head and neck, as in life, are *perfectly moveable, can be drawn by the bridle* into any position such as the live horse could assume, and all the gestures are those which a real animal would throw himself into; in fact, by aid of the assistant's rope or cord, all the violent evolutions which we have seen in the horses acted upon by Rarey are again produced, and a desperate battle for mastery between rider and horse again ensues.



